

**IN THE CLAIMS:**

Claims 1-32 were cancelled and claims 33-40 added in the previous Amendment (Amendment A). All pending claims and their present status are produced below.

1 1. (Canceled)

2 2. (Canceled)

3 3. (Canceled)

4 4. (Canceled)

5 5. (Canceled)

6 6. (Canceled)

7 7. (Canceled)

8 8. (Canceled)

9 9. (Canceled)

10 10. (Canceled)

11 11. (Canceled)

12 12. (Canceled)

13 13. (Canceled)

14 14. (Canceled)

15 15. (Canceled)

16 16. (Canceled)

17 17. (Canceled)

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19 19. (Canceled)

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21 21. (Canceled)

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24 24. (Canceled)

25 25. (Canceled)

26 26. (Canceled)

27 27. (Canceled)

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29 29. (Canceled)

30 30. (Canceled)

31 31. (Canceled)

32 32. (Canceled)

1 33. (Previously Presented) A method of predicting the performance of an application in a  
2 multi-hop network, the multi-hop network comprising a client and a server, the  
3 method comprising:

4 determining, for each thread of the application, a set of application factors

5 corresponding to a set of functions performed by the application, the  
6 application factors being independent of the network and of a network flow  
7 control protocol, the application factors comprising average packet size and  
8 average node send time;

9 determining a set of network delay times corresponding to a series of network delay  
10 sources along the multi-hop network path, the network delay sources  
11 comprising a queuing delay, a bandwidth delay, a bottleneck delay, and one of  
12 a transmission delay, a constant delay, and a node delay;

13 determining a set of network flow factors corresponding to the network flow control  
14 protocol, the network flow factors comprising a number of turns added per  
15 direction, the direction relative to the client and the server;  
16 determining a duration of each thread of the application based on the application  
17 factors, the network delay times and the network flow factors; and  
18 determining a total response time based on the durations of the threads.

1 34. (Previously Presented) The method of claim 33, wherein said determining a set of  
2 network flow factors comprises generating a histogram of node send time, and determining  
3 the number of turns added per direction based on the histogram.

1 35. (Previously Presented) An apparatus for predicting the performance of an application  
2 in a multi-hop network, the multi-hop network comprising a client and a server, the  
3 apparatus comprising:  
4 means for determining, for each thread of the application, a set of application factors  
5 corresponding to a set of functions performed by the application, the  
6 application factors being independent of the network and of a network flow  
7 control protocol, the application factors comprising average packet size and  
8 average node send time;  
9 means for determining a set of network delay times corresponding to a series of  
10 network delay sources along the multi-hop network path, the network delay  
11 sources comprising a queuing delay, a bandwidth delay, a bottleneck delay,  
12 and one of a transmission delay, a constant delay, and a node delay;

13 means for determining a set of network flow factors corresponding to the network  
14 flow control protocol, the network flow factors comprising a number of turns  
15 added per direction, the direction relative to the client and the server;  
16 means for determining a duration of each thread of the application based on the  
17 application factors, the network delay times and the network flow factors; and  
18 means for determining a total response time based on the durations of the threads.

1 36. (Previously Presented) The apparatus of claim 35, wherein said means for  
2 determining a set of network flow factors comprises means for generating a histogram  
3 of node send time, and means for determining the number of turns added per direction  
4 based on the histogram.

1 37. (Previously Presented) A computer readable medium comprising computer readable  
2 instructions which, when executed by a processing system, cause the processing  
3 system to perform a method of predicting the performance of an application in a  
4 multi-hop network, the multi-hop network comprising a client and a server, the  
5 method comprising:

6 determining, for each thread of the application, a set of application factors  
7 corresponding to a set of functions performed by the application, the  
8 application factors being independent of the network and of a network flow  
9 control protocol, the application factors comprising average packet size and  
10 average node send time;

11 determining a set of network delay times corresponding to a series of network delay  
12 sources along the multi-hop network path, the network delay sources  
13 comprising a queuing delay, a bandwidth delay, a bottleneck delay, and one of  
14 a transmission delay, a constant delay, and a node delay;  
15 determining a set of network flow factors corresponding to the network flow control  
16 protocol, the network flow factors comprising a number of turns added per  
17 direction, the direction relative to the client and the server;  
18 determining a duration of each thread of the application based on the application  
19 factors, the network delay times and the network flow factors; and  
20 determining a total response time based on the durations of the threads.

1 38. (Previously Presented) The medium of claim 37, further comprising computer  
2 readable instructions which, when executed by the processing system, cause the processing  
3 system to generate a histogram of node send time and to determine the number of turns added  
4 per direction based on the histogram.

1 39. (Previously Presented) An apparatus for predicting the performance of an application  
2 in a multi-hop network, the multi-hop network comprising a client and a server, the  
3 apparatus comprising:  
4 application factor logic for determining, for each thread of the application, a set of  
5 application factors corresponding to a set of functions performed by the  
6 application, the application factors being independent of the network and of a  
7 network flow control protocol, the application factors comprising average  
8 packet size and average node send time;

9           delay time logic for determining a set of network delay times corresponding to a  
10           series of network delay sources along the multi-hop network path, the network  
11           delay sources comprising a queuing delay, a bandwidth delay, a bottleneck  
12           delay, and one of a transmission delay, a constant delay, and a node delay;  
13           flow factor logic for determining a set of network flow factors corresponding to the  
14           network flow control protocol, the network flow factors comprising a number  
15           of turns added per direction, the direction relative to the client and the server;  
16           first duration logic for determining a duration of each thread of the application based  
17           on the application factors, the network delay times and the network flow  
18           factors; and  
19           second duration logic for determining a total response time based on the durations of  
20           the threads.

1       40. (Previously Presented) The apparatus of claim 39, wherein said flow factor logic for  
2           determining a set of network flow factors comprises logic for generating a histogram  
3           of node send time, and logic for determining the number of turns added per direction  
4           based on the histogram.